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REPORT

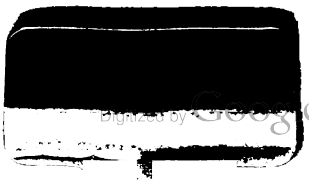
OF THE

NEW JERSEY STATE MUSEUM

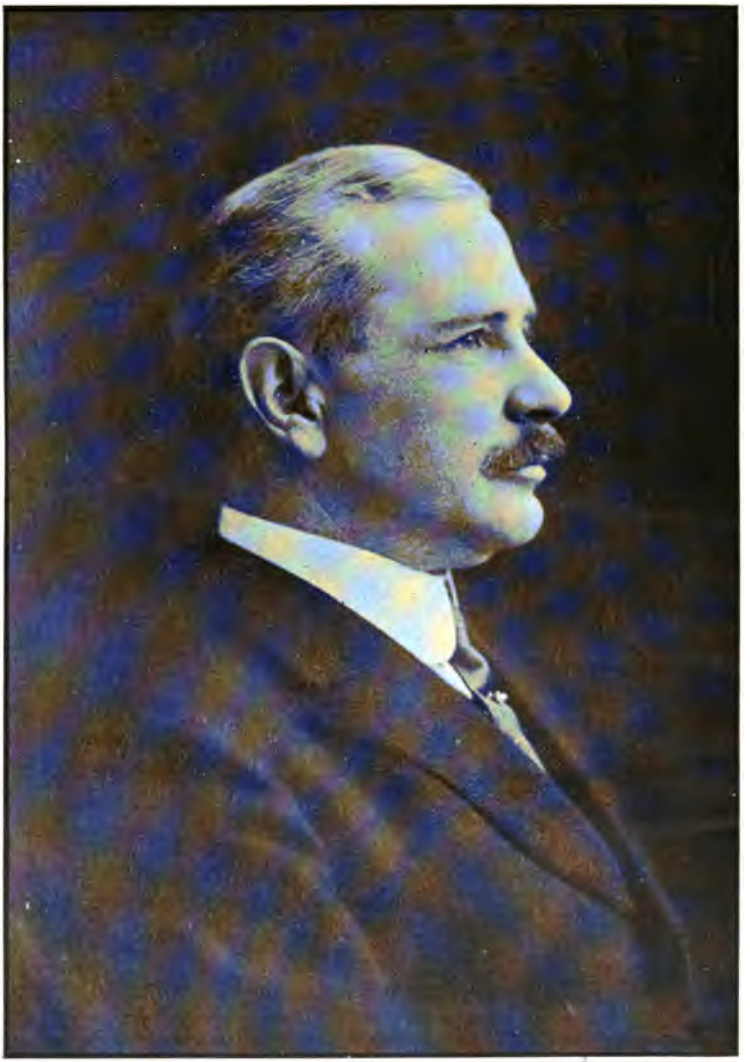
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Hon. James F. Fielder, Governor of New Jersey.

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ANNUAL REPORT

OF THE

NEW JERSEY STATE MUSEUM

Including a Statement of the Establishment of a State Museum, the Awards Received at the Expositions and the Reports Issued by the Museum

1914

TRENTON, N. J.
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Letter of Transmittal.

TRENTON, N. J., November 30th, 1914

To the Honorable James F. Fielder, Governor of the State of New Jersey:

SIR—I have the honor to present, for the Commissioners of the New Jersey State Museum, the annual report, including a statement of the establishment of a State Museum, the awards received at the expositions and the reports issued by the museum.

SILAS R. MORSE,
Curator.

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Commissioners of the New Jersey State Museum.

STATE COMMISSIONER OF EDUCATION, CALVIN N. KENDALL, *President.*
STATE GEOLOGIST, HENRY B. KÜMMEL, *Secretary.*
PRESIDENT STATE BOARD OF AGRICULTURE, JOS. S. FRELINGHUYSEN.
PRESIDENT OF THE SENATE, JOHN W. SLOCUM.
SPEAKER OF THE HOUSE, AZARIAH M. BEEKMAN.

SILAS R. MORSE, *Curator.*

Heads of the Several Departments of the New Jersey State Museum.

CALVIN N. KENDALL, COMMISSIONER OF EDUCATION,
Educational.

JACOB G. LIPMAN, Ph.D., RUTGERS COLLEGE,
Agriculture.

HENRY B. KÜMMEL, STATE GEOLOGIST,
Geology.

JOHN C. SMOCK, EX-STATE GEOLOGIST,
Forestry.

THOMAS J. HEADLEE, Ph.D., STATE ENTOMOLOGIST,
Entomology.

JAMES T. MORGAN, DEPUTY OF BUREAU OF LABOR STATISTICS,
Manufactures.

HERBERT M. LLOYD, SECRETARY OF GEOLOGICAL SURVEY,
Archaeology.

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New Jersey State Building at St. Louis, 1904. Reproduction of Washington's Headquarters at Morristown, N. J.

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Curator's Report.

This report contains a short history of the Museum, including the geological, educational and agricultural. It gives the recommendations of a museum by the heads of the geological and educational departments, also Governor George T. Werts in his annual report of 1895. It contains titles of all of the laws creating the Museum and several amendments to the same and an account of the organization of the present Museum and the part the Educational, Geological and Agricultural Departments and the Museum took in the expositions at Philadelphia, New Orleans, Chicago, Buffalo, Charleston, St. Louis and Jamestown. A list of the medals and awards received at each as far as can be ascertained from any records that could be found, also a list of the reports issued by the Museum up to the present time with a synopsis of each are included.

The report gives the new plan for furnishing lantern slides to the public schools and state departments for lectures and illustrating different subjects, to be loaned free, except for transportation and breakage or loss of slides.

THE COMMENCEMENT OF THE GEOLOGICAL MUSEUM.

Collections for the Geological Museum were commenced at an early day. In the report of the Geological Survey of 1836, by Henry D. Rogers, we find the following: "Specimens of materials susceptible of useful application have been gathered from districts adjoining these profiles and likewise from much of the intervening country, all the most important localities throughout which were visited for the purpose."

At a later date, during the Kitchell Survey, this work was continued, as is shown by the following instructions, given in Dr. Kitchell's report of 1855:

"Collect three suites of specimens of all the various rocks, minerals, ores, marls, clays, sands, peats and fossils found in each township. Let them be uniform in size, viz., four inches square and two inches thick, except when isolated or grouped crystals and fossils require specimens of greater or less dimensions. Obtain them directly from the formation, deposit, or mine, and let them possess fresh, clean surfaces.

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"The rocks, clays, peats, sands and fossils should be characteristic of formations, strata, beds and layers. The minerals, ores, rocks, &c., of economical value, should be characteristic of localities, such as deposits, mines and quarries.

"Label each specimen (in accordance with the accompanying label) with its name (when known), its precise locality, date of collection and name of collector, and carefully wrap it in strong thick paper.

"Let the label of each specimen refer to the particular page of a note-book on which it is described. Carefully pack each series of speciemns in strong boxes, in such manner that their surfaces cannot come in contact or be scratched or injured by rubbing together The weight of each box should not exceed 150 pounds. Choice specimens of crystallications and fossils should be wrapped in cotton and packed separately.

"Prepare a list of specimens in each box, numbering each to correspond with a number on the outside of the wrapper, and place it on top of the specimens, when the box is filled. Mark distinctly, and number each box to correspond with the note-book in which the specimens are described, and address it as follows: (————————————)

"Whenever an opportunity may allow, collect specimens of Natural History, such as plants, birds, animals, reptiles, fishes, insects, bugs and infusoria. Preserve and pack them carefully, in accordance with the accompanying directions."

The present Geological Survey was established in 1864, with Dr. George Cook as State Geologist. During the earlier years of Dr. Cook's Survey, the work was all carried on from Rutgers College, New Brunswick, and such specimens as were collected were deposited in the College Museum.

The Centennial Exposition in 1876 gave opportunity for making extensive collections, as is shown by the following extract from the Annual Report of the State Geologist for 1875:

"Collections of representative specimens of rocks, ores, minerals, soils, fertilizers, building stones, glass sands and other natural and useful products, have been needed for our State collection and for institutions of learning. The demand for such specimens, in order to exhibit properly the richness and variety of the natural products of New Jersey at the approaching Centennial Exposition in Philadelphia, has necessitated making the collection this year."

"Professor J. C. Smock, with two assistants, has been steadily at this work since July 7th. The collection of rock specimens, iron and zinc ores and minerals, in all the northern part of the State and in the clay district, is finished. Specimens have been collected from at least 370 localities, one hundred of which were iron mines, and the specimens number more than two thousand. There are still about one hundred localities to visit, and perhaps three hundred specimens to collect, and when this is done the series will be completed as fully as desirable at present.

"The specimens for the Centennial will be arranged in the State Cabinet at Trenton this winter, and removed to the Exposition in the spring. At the close of the Centennial they will be brought back to the State Cabinet and arranged there for permanent exhibition.

"Duplicate specimens have been collected for the geological museums at Princeton and Rutgers Colleges."

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THE GEOLOGICAL SURVEY EXHIBIT AT THE CENTENNIAL EXPOSITION AT PHILADELPHIA, 1876.

This exhibit consisted of specimens of building stones, roofing slate, flag stones, limes, cement, &c., besides 256 specimens of iron ores; 20 specimens of zinc ore, 7 specimens of copper ore, 26 specimens of potters clay and glass sand, 10 specimens of barytes, manganese, 20 or more specimens of fire brick, pottery, alum, glass, &c. There was also a collection of characteristic fossils, 24 maps and publications of the Geological Survey, &c.

The following award was conferred:

"GEOLOGICAL SURVEY OF NEW JERSEY.

"PROF. GEORGE H. COOK, *State Geologist.*

"Report—Large, well selected and well arranged collections, showing (1) all the rocks of the various formations known in New Jersey, including the potters clay and the green sand; (2) the ores of iron and zinc, and the products of their metallurgical treatment; (3) the building stones; (4) a fine collection of rare crystalline minerals of the State; (5) plans illustrating the mode of occurrence of the magnetic iron ores, a model of the Franklin Furnace zinc mine, and the geological maps published by the State Survey; the whole giving a very complete and most instructive view of the scientific and economic geology of New Jersey.

"(Signed) T. STERRY HUNT."

AGRICULTURAL EXHIBIT.

"The Geological Survey furnished specimens of soils, sub-soils, marls and other natural fertilizers, and a collection of all the woods growing in New Jersey for this collection. It contained samples of 114 soils and sub-soils, representing the kinds found on the several geological formations and from all parts of the State, seventy-nine green sand marls, four calcareous marls and seventeen fertilizers, as shells, lime, muck, &c.

"These specimens were exhibited in glass bottles, enough of each being put in to show its characteristic appearance. They represented very fully the green sand marls and miocene marls in nearly all their common forms, as found in the clay marls, in the lower, middle and upper marl beds, and in the miocene localities. The soils of the marl region were also well represented by good and fairly average specimens, showing all the varieties of soil found in that part of the State. From northern New Jersey we have a few good soils, typical of large areas of some of our best and most productive land. These make the nucleus of a collection which will represent all the varieties of soil found within our limits, and they are all good specimens for chemical examination and study.

"Of the woods there were seventy-two specimens, brought from one hundred different localities, and each specimen was represented in three sections, one being cut crosswise, one lengthwise and the third aslant. It is a fine collection of native woods. At the close of the exhibition these specimens were returned to the museum of the Geological Survey at Trenton, for permanent exhibition and are now arranged there."*

* Taken from the Report of the State Geologist for 1876.

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All of the above material belonging to the State was, after the Centennial Exposition, placed in the State House at Trenton.

STATE MUSEUM IN 1877.

In the report of George H. Cook, State Geologist in 1877, we find the following account of the Museum of the Geological Survey:

"This Museum occupies all the front of the third story of the State House. It is open every week day. The specimens of the Geological Exhibit at the Centennial, and most of those of the Agricultural Exhibit, are arranged here. It is visited by our own citizens from all parts of the State and by strangers who come to see the State House, and its various departments and offices. In this way our various minerals and other natural products are brought to the notice of large numbers of people. It is desirable to add to the collection any specimens from the State which will improve it, in variety and quality, and donations for this purpose will be gladly received and placed on exhibition with the name of the donor."

Much of the material in the Museum was destroyed by fire in 1885, when a part of the State House was burned. The remainder was carefully assorted, relabeled and preserved to form the nucleus of the present geological collection.

THE GEOLOGICAL MUSEUM.

The Museum of the Geological Survey was established by Chapter 222, Laws of 1890, and rooms were ordered provided. The collections belonging to the State are those which formed a part of the old State Museum, and which were sent to the exposition at New Orleans, and the materials collected during the progress of the Survey since that time and stored at New Brunswick. "They are mostly good representative specimens of ores, rocks, minerals, clays, marls and woods of the State, and are nearly all suitable for a new museum. In view of the establishment of a museum, I have had collections of our iron ores made which are full and typical of their occurrence. This will make an important and large addition to the materials now stored in the State House. A State Museum which may contain representatives of the economic wealth of the State is much wanted for their proper exhibition and for distribution information to the people. These collections, aided by maps, and particularly by models (or relief maps), will be valuable object lessons and illustrate the reports and catalogues of the natural history of the State."*

* Taken from the Report of the State Geologist for 1890.

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The World's Fair in 1893 and the Pan-American Exposition in 1902 made necessary additional collections and added some of the most valuable material to the Museum, notably, the large relief model of the State, the smaller models of typical localities, and the transparencies which adorn the Museum windows.

Following is an excerpt from the report of the State Superintendent of Public Schools, 1876, recommending a state museum where the centennial exhibits could be placed on exhibition:

"A room is being prepared in the State House for the reception of the exhibit, where the work can be seen and examined by parents, school officers and teachers at any time. My desire is that here it may serve as a growing museum of school work. If it is made known throughout the State that meritorious work from the schools will be received at any time, and added to the present exhibit, a constant stimulus to excel will be afforded to both teachers and pupils."

The report of Superintendent Apgar of 1877 said:

"It is with pleasure that I am able to report that a room has been secured in the State House for the display of our Centennial Educational Exhibit. The cases, frames, books and other articles are arranged nearly as they were in Philadelphia, and the whole display presents the same attractive appearance it did at the exhibition. Parents, teachers and pupils of the State have thus an opportunity now of examining this collection of school work with more care and satisfaction than was possible, because of the crowds and want of time, at the Centennial. The number who daily visit this new display of the exhibit is evidence of the permanent interest which it is likely to secure. This interest will undoubtedly increase. This collection contains the work of about 14,000 pupils. Those who grow to be men and women will rejoice to have an opportunity to examine the work they did as boys and girls for the Centennial anniversary of their country's history. They will examine it then with far more interest than now.

"It is hoped that this exhibit will serve as a nucleus for a growing museum, where may be gathered and suitably displayed all work of acknowledged merit which the schools may desire to contribute. Thus, at all times, an opportunity would be afforded every teacher to contribute such specimens as shall serve as evidence of the character of work he is doing, and the nature of the result he is securing. No better plan, in my judgment, can be devised for stimulating and encouraging pupils and teachers in their work. A child is always delighted when he is able to do something that can be seen, and particularly so when the work done possesses merit, and is not only examined, but receives commendation. A teacher cannot offer a greater inducement to his pupils to excel, than to let it be known that the very best specimen of work done in each of the branches, pursued during the year, will be forwarded to Trenton, to be exhibited along with the Centennial work."

Chapter 77 (P. L. 1879), Laws of 1879, provided:

That the governor of this state be and he is hereby authorized to procure in the name of the state, by gift or loan, a collection of objects of suitable designs in pottery, porcelain and glass, to serve as models and objects for the aid and instruction of potters, glass makers, designers, decorators and students; and the governor is hereby authorized to cause to be prepared a suitable room in the state house for the care and preservation of the said collection; and the said room shall be kept open at reasonable hours so that the said collection shall be at all proper times subject to examination by artists, designers, manufacturers and the public at large.

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HOW THE PRESENT STATE MUSEUM WAS CREATED AND THE OBJECT OF IT.

The act creating the present State Museum became a law March 20th, 1895, as Chapter 183, Laws of 1895. Governor George T. Werts, in his annual message of 1895, after the Columbian Exposition at Chicago in 1893, said:

"The exhibits at the Columbian Exposition at Chicago in 1893 including the educational, agricultural, geological and sea coast exhibits were very fine and cost large sums of money. If preserved intact they are now worth more than their original cost, as it would be impossible to duplicate them. The furniture was quite costly and they are now stored in the Fidelity Storage Warehouse in the city of Trenton. In my opinion the exhibit should be preserved, and the State should provide some place or places where they may be placed as a Museum or educational exhibit. They should not be sold as a whole and to sell them piecemeal would produce but an insignificant sum and destroy what can never be replaced."

In accordance with the Governor's recommendations the Legislature passed the law creating the Museum. Before this, there was a geological exhibit or museum having in it very valuable specimens from the State of New Jersey, a part of which were displayed in one of the rooms in the State House. The Museum Law of 1895 was amended by the Legislature of 1896.

The Museum Commission instructed the Curator to have circulars prepared, printed and circulated explaining the intent of the Museum.

In compliance therewith, the following circulars were printed and circulated:

No. 1.—Circular of information, stating how the Museum was created and the objects of its work.

No. 2.—This was to school officers, superintendents and teachers, stating that the Museum was designed to become one of the permanent educational factors and how it expected to accomplish it.

No. 3—Was to the manufacturers of the State asking them to help make the Museum a means of aid to their business. (For lack of room very little has been done along this line, although we have had many offers to contribute specimens, which we were obliged to decline for want of room to display them properly.)

No. 4.—Was to the farmers and agriculturists of the State. (It was intended to make this department of the Museum very important in exhibits that would be of great benefit to them. The response to this circular was good and we received many contributions. Among the most valuable is the fine exhibit of insects prepared by the late Prof. John B. Smith, through the courtesy of the State Board of Agriculture and the Agricultural College at New Brunswick. Also the exhibit of "How to Exterminate Mosquitoes," by Prof. Smith, which attracted so much attention at the exposition at St. Louis and Jamestown, as well as the Museum here in the State House. This exhibit has been studied by persons from many parts of the United States and foreign countries.)

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Natural History Exhibit in New Hall.

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A number of donations have come to the Museum since its creation.

The act of 1895 made it the duty of the Commission having charge of the restoration of the State House to have prepared suitable rooms for said Museum. Before any action was taken the Commission was abolished, and in 1896 an amendment was enacted (Chapter 195, Laws of 1896) making it the duty of the Museum Commission to prepare plans for such alterations as were necessary to provide suitable rooms for the Museum in the State House, provided that said plans should be approved by the State House Commission and the work done under its supervision.

As there was no room available, and it was desirable to take the exhibits out of storage, the State House Commission (the Governor, Comptroller and Treasurer), assigned to the Museum Commission the third floor corridor and the two attic rooms adjoining it for the storage and display of the exhibits. The State House Commission had the rooms put in as good condition as possible. On account of the limited space, the arrangements were not very satisfactory, and rendered it impossible to display properly the old exhibits and leave space for the new ones.

At a meeting of the Museum Commission held at an early date after its formation, it was voted that Messrs. Smock and Morse should have plans drawn for an addition to the State House, which should include a suitable room for the Museum. Plans were drawn and submitted to the State House Commission and approved by that commission. As there was no appropriation, the work could not be carried out at that time.

In 1900 the Legislature made an appropriation to build the addition, and the State House Commission was empowered to have plans made and the addition erected. This has been done, and the third floor was finished for the Museum in the winter of 1901 as per plans of the Museum Commission.

RESOLUTIONS TURNING OVER EXHIBITS TO STATE MUSEUM.

At a meeting held April 5th, 1895, the Museum Commission received notice from the Secretary of the State House Commission that it had assigned to the Museum Commission the third floor corridors and two rooms opening off the same.

At a meeting of the Executive Committee of the State Board of Agriculture, held April 23d, 1895, the following resolution was adopted:

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WHEREAS, A Commission has been appointed to arrange for a State Museum, and has appointed a Curator to have charge of such articles as may properly be placed therein, and as there are in the agricultural collection exhibited at Chicago, now stored at the Fidelity Warehouse, Trenton, a number of articles which should be preserved in said State Museum; therefore,

Resolved, That the Executive Committee of the State Board of Agriculture hereby requests the authorities in charge of the agricultural exhibit at the warehouse, to release the same to the State Museum Commission or the Curator thereof.

Approved,
D. D. DENISE,
President.

FRANKLIN DYE,
Secretary.

In accordance with this resolution the Chicago Agricultural Exhibit was turned over to the Curator of the Museum and has been kept and cared for up to the present.

The following is an extract from the minutes of a meeting of the Board of Managers of the Geological Survey held December 2d, 1902:

"After a statement of the laws regarding the Geological Museum and the State Museum, the following resolution was passed:

"'*Resolved*, That the State Geologist be instructed to place such part of the Geological collections as are now on exhibition and are not needed for purposes of study in charge of the State Museum Commission, and that the Board of Managers reserve the right to assume direct charge of all Geological Collections whenever in their opinion the interests of the Survey demand it.'"

MUSEUM EXHIBIT AT PRESENT.

Educational Department.—This exhibit is in the corridor and side room on the third floor of the State House. It is a large and interesting exhibit of work from the public, state schools and other state institutions.

In this section can be found nearly all of the educational exhibits that were shown at Chicago in 1893, Buffalo in 1901, South Carolina in 1901–2, St. Louis in 1904, Jamestown in 1907, and a part of that sent to Philadelphia in 1876 and New Orleans in 1884. Most of the work is either in bound volumes or in the swing frame cabinets which were invented and first used for the Educational Exhibit at Chicago in 1893, and since used at all the expositions by others. This method was a revelation in the way of exhibiting specimens, as it increased the wall space 32 times and preserves the work.

Geological Department.—This exhibit is to be found in the large exhibit room on the third floor. The geological specimens are mostly shown in cabinets made especially for the State Museum and which were planned by the Curator and State Geologist. The specimens can be easily seen, yet they are under glass and locked. Under these cabinets are sets of drawers, interchangeable, in which duplicate

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specimens are kept. There is one large relief map of the State and many other smaller maps, models, and borings from artesian wells in the State. There is also a plaster reproduction of a Hadrosauras Foulkii, the remains of which were found below Haddonfield, N. J., in the marl beds. The original part of the skeleton was given to the Academy of Natural Sciences in Philadelphia.

The Natural History Department.—These exhibits are also in the large exhibit room in the rear of the State House on the third floor. In this department specimens of nearly all of the birds, mammals, woods, insects injurious to vegetables, the mosquito exhibit on "How to Exterminate Mosquitoes," amphibians, reptiles, birds' eggs, &c., are found. Some very interesting mammals (beaver, cubs, seals, deer, ground hogs, woodchucks, skunks, foxes, rabbits, musk rats, otters &c.) are on exhibition.

Here also is found a case of sections of rails used in the railroads in New Jersey controlled by the Pennsylvania Railroad since the first track was laid.

There is also a very interesting cabinet of sliced woods and many other specimens we cannot mention here.

We have a very good collection of Indian relics that have been found in New Jersey, and are receiving many additions continually.

The "Peter Pan Collection" of small mammals, all caught by an angora cat, attracts a great deal of attention. We have some very fine specimens of mounted heads of moose, deer, elk and buffalo.

We have been able to procure nearly all of the New Jersey specimens of birds and mammals and a large part of the fish, amphibians and reptiles and hope soon to have these lists complete. We have several specimens of extinct birds and mammals, also several specimens of freak mammals.

The large photographs are in the corridor leading to the large museum hall on the third floor.

LARGE PHOTOGRAPHS OF NEW JERSEY PLACES OF INTEREST.

The collection of large photographs of the principal sea coast towns and other places of interest in the State, measuring 23 in. x 36 in., framed 42 in. x 54 in., and which cost the State over $10,000, were exhibited in the Transportation Building at Chicago, in 1893. At the close of the Exposition this valuable collection was turned over to the State Library. Mr. Hamilton, then Librarian, turned them over to the Curator of the State Museum to be the property of the same. Most of them have been on exhibition in the State House up to the present time. Some of them have been used at the several expositions since 1893.

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SCHOOL AND MANUAL TRAINING WORK.

The original intention of the Museum Commission was to add each year to the exhibits we had from the several expositions, new work to show the advancement and improvement in this line of work. Owing to the lack of space, it has been impossible to carry out this plan, greatly to the regret of all concerned. We believe that if some of the best work done in the Public Schools in the several branches could be sent to the Museum each year for exhibition, it would be a great incentive to the pupils to do better work. It is hoped that this plan can yet be carried out.

We have work from nearly every school in the State, but no new work since the Jamestown Exposition in 1907. We hope the time will soon come when the State can make more room for the Museum so that we can properly display what we have and add other work, as intended.

THE GEOLOGICAL EXHIBIT.

The Geological Department of the Museum contains a portion of the material collected by the Geological Survey in the course of its investigations, as well as collections obtained by purchase and those made especially for the World's Columbian Exposition and the Pan-American Exhibition.

It is not planned to give here a complete list of the geological specimens, but the following summary indicates the scope of the exhibit, which is limited strictly to material found within the State. The collection consists of minerals iron, copper and zinc-ores, rocks, clays and clay products, sands, marls, soils, building stones, well-borings, fossils, models, maps and transparencies.

The Mineral collection includes, with one or two exceptions, specimens of all the minerals found in the State. Many of these specimens are of exceptional beauty and great value. In some cases these are of great rarity, there being but few duplicates in existence.

The Museum is extremely rich in its collection of iron ores. These include specimens from all the iron ores of the State, which have ever been producers of any importance. Since many of these mines are no longer worked, and, in some cases, the openings are full of water and are permanently abandoned, this collection cannot be duplicated.

The Museum also has a fine set of copper ores, chiefly native copper from the American Copper Mine at Somerville.

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The zinc ores from Franklin are varied and rich, and the Museum has many fine specimens, zincite, willemite and franklinite.

The rock specimens represent the various types of rock formations found in the State.

The Clay industry is one of great importance in the State. It is fitting, therefore, that the Geological Museum should make a good display. All the samples from important localities are on exhibition, representing the most valuable grades.

The glass and fire-sands of South Jersey are of great commercial importance. A fairly full series of specimens, each in a handsome glass jar, is on exhibition.

The green sand marls of the State were formerly of great value as fertilizers, and they are still dug to a considerable extent. Marl from all the important pits are represented in the Survey collection.

Many samples of various types of soil, representative of the different parts of the State, are on exhibition.

The building stones of the State are shown in neatly-dressed cubes.

Artesian and deep-bored wells form the chief source of potable water for large sections of the State and numerous towns, notably along the coast, derive their supply from them. The Survey has made careful record of many of these wells and obtained suites of specimens of the borings. A number of these, both from Northern and Southern New Jersey, have been arranged in long glass tubes on a reduced scale and placed on exhibition in the Museum. The most notable one is that of the deep well at Atlantic City, 2,306 feet from the floor of Young's Pier, the deepest boring in the State. These sections are of great value to the scientist as well as of interest to the general public.

Many of the geological formations, both of the northern and southern portions of the State, contain numerous fossils—the remains of the animals living at the time the rocks were formed.

The Geological Survey is in possession of large collections of fossil-fish from the red sandstone formation and of old fossils from Warren and Sussex counties.

There are two excellent cross sections of white cedar that were found buried eleven feet beneath the surface in a salt marsh near Dennisville, Cape May county, and donated the exhibit by Dr. Maurice Beasley. These specimens are over three feet in diameter and are well preserved.

The large copper model of the State, on a scale of one inch per mile, which was made for exhibition at the World's Columbian Exposition, occupies a conspicuous place in the Museum and attracts much attention. In addition to the large model, there are several small ones, made for the Pan-American Exposition, of selected localities in the State.

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NEW SPECIMENS.

Among the most valuable specimens we have purchased are the following:

A pair of otters, bought of Mr. L. A. VanNest, a trapper. They were caught in the stream that runs into Carnegie lake, at Princeton, N. J., and are as nice a pair as can be found. This animal is very rare in New Jersey now, and no doubt will soon be extinct in the State. The pair have been well mounted.

We have procured several nice specimens of turtles, one map turtle which was taken in the Delaware near the State House, also a fine pine snake. We have several other specimens of reptiles at this time being mounted.

Our collection of mammals and birds of New Jersey is very near complete. We have been able to procure a pair of heath hens, a species that is extinct in the United States, except a few in captivity at Martha's Vineyard, Mass. We also have a pair of wild or passenger pigeons. This bird is extinct. Not one is known to be living in the world. The last in captivity died in 1914. This is the pigeon that used to be so plentiful in the United States that they were caught by the thousands and sent to market. In their flight they would shade the sun like a cloud. When a boy, in Maine, I used to bait them and catch them in a net and sell them alive for 50 cents a dozen. Now you could get $2,000 for a live pair. We also have a group of Hungarian partridge—eleven. The Fish and Game Commission has put out hundreds of these birds in different parts of the State to try and see if they would be a success as a game bird. Mr. Napier, President of the Commission, informs me that it has not been a success.

Through the kindness of the Fish and Game Commission we have procured two fine specimens of rainbow trout, which were raised in the New Jersey Fish Hatchery at Hackettstown. They are being mounted for the Museum. We did not have any of this species in our collection. This Commission has always been a great help to the Museum.

DONATIONS TO THE MUSEUM.

Woods.—One of the first donations to the Museum was a large collection of woods made under the supervision of Mr. Benj. Heritage, of Mickleton, Gloucester county, N. J., assisted by his friends and neighbors.

Continental Money.—One of the most valuable gifts is a collection of Continental money, complete, with the exception of one note, which

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Right-hand side of Museum from the rear of hall.

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was presented by Hon. Ernest R. Ackerman, while President of the Senate, a member of the Museum Commission and Acting Governor, to the Museum. The value of this collection can hardly be overestimated, as such collections are very valuable and scare and cannot be duplicated. This was placed in a cabinet made for the collection, each note being between plates of glass, in swing frames, so that both sides of the notes can be examined without handling.

Indian Relics.—Several collections of Indian relics have been donated and others will be as soon as we have more room to display them. The Norton collection was donated to the Museum during the past year.

The section of railroad rails, spikes, &c., were presented to the Museum by Samuel L. Roberts, of Bordentown, N. J. He made three exhibits like this, one for the Pennsylvania Railroad, the other for the Smithsonian Institute at Washington, D. C., and we have the third. This collection shows a section of all the rails used on the railroad in New Jersey under the control of the Pennsylvania Railroad since the first road in New Jersey on which the John Bull, the first engine ran, on up to the time the exhibit was made in 1893. This is an exhibit that can never be duplicated, and would no doubt have gone out of the State had it not been for the Museum.

The gift of Dr. H. C. Norton of Indian relics is a valuable addition, also the collection willed to the Museum by Joseph B. Livzey. Many valuable things have gone to other Museums because New Jersey had no Museum or place to keep them.

The Gross Botanical Collection, which was donated to the Museum by Dr. C. A. Gross's son, has been arranged, mounted and classified by Dr. Witmer Stone and is now back in the Museum. It is a valuable exhibit, and will be more so when we get room to display it.

We have had several valuable specimens presented to the Museum, such as birds and mammals by Ex-Senator George C. Low, of Ocean County. We have also received several other small donations.

MUSEUM REPORTS.

There has been issued by the State Museum twelve reports since its reorganization by the law of 1895. There were no reports for the first six years because no rooms had been provided for installing the exhibits.

First Report, 1901.—The first report, issued in 1901, gave the laws of 1895 and the amendment of 1896, under which the Museum was created. The first meeting of the Commission for organization was held March 25th, 1895. It consisted of President of the Senate, Hon. E. C. Stokes; Speaker of the

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Assembly, Hon. Joseph Cross; Superintendent of Public Instruction, Dr. A. B. Poland; State Geologist, Prof. John C. Smock, and President of the State Board of Agriculture, Hon. D. D. Denise. At this meeting Dr. A. B. Poland was elected president; Hon. E. C. Stokes, secretary, and S. R. Morse was unanimously elected curator at a salary of $1,500, which salary he did not receive until the Museum was established in the State House. This report contains a reprint of the circulars prepared by the Curator and approved by the Commission, also an account of the exhibits at the Pan American Exposition held in Buffalo in 1901 and the awards received.

Second Report, 1902.—The second report was for 1902. The Commission at this time consisted of Superintendent of Public Instruction, Dr. C. J. Baxter; Prof. Henry B. Kümmel, State Geologist; Dr. E. B. Voorhees, President of the State Board of Agriculture; Hon. C. Asa Francis, President of the Senate, and Hon. Wm. J. Bradley, Speaker of the Assembly. The heads of the different departments in the Museum at this time were as follows: Education, Dr. C. J. Baxter; Agriculture, Dr. E. B. Voorhees; Geology, Dr. H. B. Kümmel; Forestry, Prof. John C. Smock; Birds and Botany, Prof. Austin C. Apgar; Entomology, Prof. John B. Smith; Manufactures, James T. Morgan, Esq.; Taxidermist, Wm. H. Werner, Esq.

A full account of the Museum, Educational, Geological, Agricultural and other exhibits at Buffalo are given in this report; also an account of the Educational, Forestry and other exhibits at the South Carolina Inter-State and West India Exposition at Charleston, S. C. This report also contains a list of the specimens of birds, insects, woods, &c., at that time in the Museum. A list of the medals received at the Pan-American Exposition will be found therein, the Educational State Exhibit being the only one to receive a gold medal at this exposition, the Geological Survey, a gold and silver medal and the Forestry exhibit a gold, silver and bronze medal and an honorable mention, and the Agricultural exhibit a gold and silver medal.

Third Report, 1903.—This report is a short but interesting one on the Birds of New Jersey, with illustrations and a few colored plates; also comments on the Geological Collection in the Museum. The first Arbor and Bird Day circular issued by State Superintendent of Public Instruction, Hon. C. J. Baxter, and the Proclamation of Governor Franklin Murphy, also the law for the protection of birds (1903, approved March 26th), are also found therein, under the Curator's report. The edition was soon exhausted.

Fourth Report, 1904.—This is a report explanatory of the part the New Jersey State Museum took in the Louisiana Purchase Exposition at St. Louis in 1904, and describes the several exhibits in which the Museum had a part, including the educational, museum (which embraced the geological, forestry, fish and game, insects, "How to Exterminate Mosquitoes," oysters and clams, live salt water fish, &c.). A description is also given of the new cabinets for the Museum, what the Museum did for the State exhibits at St. Louis, the names of the New Jersey Exposition Commissioners at St. Louis, and Jersey Day at the Exposition. The Commissioners of the Museum at this time were: Hon. C. J. Baxter, Superintendent of Public Instruction; Dr. Henry B. Kümmel, State Geologist; Prof. E. B. Voorhees, President of the State Board of Agriculture; Hon. Edmund W. Wakelee, President of the Senate, and Hon. John Boyd Avis, Speaker of the Assembly.

Fifth Report, 1905.—This report contains a frontispiece picture of Governor E. C. Stokes and also a report of the Curator, giving the additions to the Museum for the year and the Geological Collections made for the public schools and a catalogue of "How to Exterminate Mosquitoes," by Prof. John B. Smith. The scientific part of this report is on "The Fishes of New Jersey," by Henry W. Fowler of the Academy of Natural Sciences, Philadelphia, and describes nearly all of the fresh and salt water fish found in New Jersey waters to date, with index and fully illustrated. These reports were placed in all of the public school and state libraries of the State. This is one of the most valuable reports issued by the Museum. The edition has been exhausted for several years.

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Sixth Report, 1906.—The report of 1906 contains a frontispiece picture of all the Commissioners of the Museum and the Curator, at that time; Hon. C. J. Baxter, Dr. Henry B. Kümmel, Prof. E. B. Voorhees, Hon. Wm. J. Bradley, Hon. S. K. Robbins and S. R. Morse. The Curator's report consists of the wants of the Museum, new collections and publications donated and purchased. A paper on the "Amphibians and Reptiles of New Jersey," by Henry W. Fowler, author of the paper on "The Fishes of New Jersey" in the report of 1905, is included. There is also a supplement to "The Fishes of New Jersey," fully illustrated.

Seventh Report, 1907.—The frontispiece of this report is a picture of then Governor, Hon. John Franklin Fort. The report of the Curator gives an account of the Museum exhibits at the Ter-Centennial Exposition at Jamestown. The Museum Exhibits under S. R. Morse, Curator, were the Comparative Educational, Fish, Birds and Mammals, Forestry, Insects Injurious to Vegetables, How to Exterminate Mosquitoes, and Social Economy. The Geological Exhibit from the Museum was prepared under the supervision of the State Geologist, Dr. Henry B. Kümmel. All these various exhibits represented fifteen different state departments and institutions and also included a very fine exhibit of Shore Health Resorts of New Jersey. In the Comparative Educational Exhibit there was work that was shown at the Centennial in Philadelphia in 1876, the Columbian Exposition at Chicago in 1893, the South Carolina and West India Inter-State Exposition at Charleston 1902, the Pan-American Exposition at Buffalo in 1901, the Louisiana Purchase Exposition at St. Louis in 1904 and new work for the Ter-Centennial Exposition at Jamestown in 1907. Governor E. C. Stokes found work in this exhibit which he prepared for the Centennial Exposition when a student in the Millville Public Schools. These exhibits were awarded many gold and silver medals and several certificates of honor.

This report contains a paper on "The Mammals of New Jersey," by Dr. Witmer Stone, Curator of the Academy of Natural Sciences in Philadelphia, also supplementary notes on "The Fishes of New Jersey" and "The Amphibians and Reptiles of New Jersey," fully illustrated (both by Henry W. Fowler).

The Commissioners of the Museum at this time were: Hon. C. J. Baxter, Dr. Henry B. Kümmel, Prof. E. B. Voorhees, Hon. Bloomfield H. Minch and Hon. Edgar E. Lethbridge.

Eighth Report, 1908.—This report has a frontispiece picture of S. R. Morse, Curator. The Curator's part of the report explains how and where the Museum reports are distributed and gives a list of the additions to the Museum. In this report is also found Dr. Witmer Stone's paper on "The Birds of New Jersey, Their Nests and Eggs." The destruction and protection of our birds is fully illustrated therein and it also contains a short supplement on "Notes on New Jersey Fishes," by Henry W Fowler. This is one of our most interesting reports, and the edition is about exhausted.

The Commission at this time consisted of Hon. C. J. Baxter, Dr. Henry B. Kümmel, Prof. E. B. Voorhees, Hon. Thomas T. Hillery and Hon. Frank B. Jess.

Ninth Report, 1909.—The 1909 report has a frontispiece of Prof. Austin Apgar, Prof. John B. Smith and Wm. H. Werner. The Curator's report contains a list of additions of the past year, the publications received, &c. The report is almost wholly devoted to "The Insects of New Jersey," written by the late Prof. John B. Smith, of the New Jersey Agricultural Department of Rutgers College. It is fully illustrated. Prof Smith also prepared the Museum exhibit on "How to Exterminate Mosquitoes," one of the best ever prepared. The State of New Jersey is proud of the work Prof. Smith did for it.

The Museum Commission then consisted of Hon. C. J. Baxter, Dr. Henry B. Kümmel, Prof. E. B. Voorhees, Hon. Samuel K. Robbins and Hon. John D. Prince.

Tenth Report, 1910.—This report contains a picture of Governor, now President, Woodrow Wilson; also a map of New Jersey showing the distribution of

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the plants and flowers. In the Curator's part of this report is a memorial of Professor Austin C. Apgar and an account of his connection with the Museum since its creation; also additions to the specimens in the Museum, publications received, &c. The second part of this report is on "The Flora of the Pine Barrens of New Jersey," by Dr. Witmer Stone, of the Academy of Natural Sciences. It is fully illustrated and is one of our most valuable reports. Nothing like it had ever been published before. It is the work of many years of study.

The Commission at this time was Hon. C. J. Baxter, Dr. H. B. Kümmel, Dr. E. B. Voorhees, Hon. Joseph S. Frelinghuysen and Hon. Harry P. Ward.

Eleventh Report, 1911.—This report has as a frontispiece a picture of Hon. Ernest R. Ackerman, at the time President of the Senate, a member of the Museum Commission and Acting-Governor; also a picture of four scientists who have been connected with the Museum, but are now deceased, Prof. Austin C. Apgar, former head of the Biological Department; Prof. John B. Smith, State Entomologist, in charge of the Entomological Department of the Museum; Dr. E. B. Voorhees, President of the State Board of Agriculture and head of the Agricultural Department at Rutgers College, New Brunswick, Commissioner of the Museum, and Wm. H. Werner, the Museum's taxidermist; also a memorial to them.

The Curator's part of this report gives an account of the Ackerman Gift to the Museum, a very fine collection of Continental Moneys; a list of publications received and specimens obtained. The scientific part is on "The Crustacea of New Jersey," by Henry W. Fowler, author of the Fish Report and the Amphibian and Reptile Report. It is fully illustrated and is one of the first works of this kind to be published. It is a fine addition to the Museum reports.

The Museum Commissioners were: Dr. Calvin N. Kendall, Dr. H. B. Kümmel, Hon. Joseph S. Frelinghuysen, Hon. Ernest R. Ackerman and Hon. Edward Kenny.

Twelfth Report, 1912.—This report is an indices of the reports of 1905, 1906, 1907, 1908, 1909, 1910 and 1911, of both common and technical names of the fishes, mammals, amphibians, reptiles, birds, insects, plants and crustacea, also an index of all illustrations in these reports. The Curator's part of this report includes letters from many prominent persons commending the Museum Reports, such as Grover Cleveland, Woodrow Wilson, Governor Hodges Mann, of Virginia, and Governors, Senators, Representatives of Congress, &c.

The Commission at this time consisted of Dr. Calvin N. Kendall, Dr. H. B. Kümmel, Hon. Joseph S. Frelinghuysen, Hon. John D. Prince and Hon. Thomas F. McCran.

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New Jersey State Building at Chicago Exposition in 1893. Reproduction of Washington's Headquarters at Morristown, N. J.

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Medals, Diplomas and Certificates

RECEIVED AT

PHILADELPHIA, 1876.	NEW ORLEANS, 1884.
CHICAGO, 1893.	BUFFALO, 1901.
ST. LOUIS, 1902.	JAMESTOWN, 1907.

EXPOSITIONS

BY THE

EDUCATIONAL, GEOLOGICAL, AGRICULTURAL AND MUSEUM EXHIBITS

AND A

SUMMARY OF THE SAME.

THE CENTENNIAL EXPOSITION AT PHILADELPHIA, 1876.

The following awards were received by the New Jersey exhibits at the Centennial Exposition:

Awards.

Educational Exhibit.
Geological Exhibit.
Agricultural Exhibit.
State of New Jersey, Commissioners for Building, &c.

Certificates.

State Department of Public Instruction, Collective Exhibit.
State Normal School, Trenton, N. J.
Laboratory Map, Drawings from Memory and Herbarium, Newark, N. J.
Thomas Moran, Oil Painting.
M. W. Dalrymple, N. J., Charts, Drawings, Water Color Paintings, &c.
Geological Survey of New Jersey, Prof. George H. Cook, State Geologist for Geological Collection.
George Such, South Amboy, N. J.—Clays.
Hampton Cutter and Sons, Woodbridge, N. J.—Clays, Kaolin and Sand.
New Jersey State Agricultural Society.—General Exhibit.

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(Individual Agricultural Exhibits.)

Gibson & Bennet, Woodbury, N. J.—Early Apples.
Thomas J. Beans, Moorestown, N. J.—Peaches.
A. H. Richards, Pleasant Mills.—Cranberries.
Fruit Growers' Trade Company, N. J.—Cranberries.
Russell Austin, Camden, N. J.—Cranberry Plants.
John S. Collins, Moorestown, N. J.—Blackberries and Raspberries. (Other Individual Exhibits.)
Prof. Samuel Lackwood.—Monmouth County Ethnology.
R. H. Rusly.—Herbarium, Flora of Essex County.

THE WORLD'S EXPOSITION AT NEW ORLEANS IN 1884.

The Educational Exhibit at New Orleans consisted of specimens of pupil's work as follows: Mathematics, grammar, composition, spelling, penmanship, drawing, map-drawing, primary work, &c. The entire school exhibit contained about 29,569 specimens.

At the close of the exposition the following awards were made:

State of New Jersey.—Collective exhibit of work of public schools.
Jersey City Public Schools.—Pupil's work.
Newark Public Schools.—Pupil's work from High School.
New Jersey State Normal School.—Pupil's work, herbaria, cases of minerals, chemicals, insects, &c.
Paterson Public Schools.—Pupil's work, kindergarten work, ornaments and geometrical solids in wood.

Diplomas.

Camden Public Schools.—Pupil's work.
Davey (Vernon L.) School, District No. 36, Essex County.—Home-made philosophical apparatus.
Elizabeth Public Schools.—Pupil's work.
Long Branch Public Schools (J. M. Green), District No. 85, Monmouth County.—Pupil's work and photographs.
Landisville (C. A. Gross).—Herbarium.
Hasbrouck Institute, Jersey City.—Student's work, framed drawings from casts.
Hoboken Public Schools.—Pupil's work.
Morse, S. R., Atlantic County.—Herbarium of marine algae.
Orange Public Schools.—Pupil's work.
Trenton Public Schools.—Pupil's work.

Certificates of Merit.

Bridgeton Public Schools.—Pupil's work.
Millville Public Schools.—Pupil's work.
New Brunswick Public Schools.—Pupil's work.
Plainfield Public Schools.—Pupil's work.
Rahway Public Schools.—Pupil's work.
Salem Public Schools.—Pupil's work.

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New Jersey Educational Exhibit at the World's Fair, Chicago, 1893. Now in the State Museum. Perspective view: Front.

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AWARDS RECEIVED AT COLUMBIAN EXPOSITION, CHICAGO, 1893.

At Chicago the following awards were received:

For the Educational Exhibit of which S. R. Morse was manager, State of New Jersey, Gold Medal for Educational Exhibit as a whole.

For first, great amount and variety of student work from nearly all parts of the State.

Second, prevalence of sound educational principles in the graded schools.

Third, very high quality of normal and model school work.

Fourth, manual training.

Fifth, original, unique and economical installation.

Sixth, splendid spirit manifested by the State in educational departments.

(Signed) JOSIAH H. SHINN,
Individual Judge.

Approved: K. BUENZ,
President Departmental Committee.

Approved: JOHN BOYD THACHER,
Chairman Executive Committee on Awards.

To the State Normal and Model School at Trenton, N. J.—General Class Work.

To the New Jersey School for the Deaf.—Educational Exhibit.

To the New Jersey School for Feeble-Minded at Vineland, N. J.—Pupil's work.

For the New Jersey Geological Exhibit.

To Silas R. Morse, Atlantic City, N. J., Manager of the Educational Exhibit.—For ingenious construction and specific utility in the economy of space, a gold medal.

To Silas R. Morse for exhibit of marine algae from New Jersey Coast.—For increasing the known algae of the N. J. coast from thirty-six to one hundred and thirty-six.

Gold medals were awarded to the following counties for work of pupils in county schools: Atlantic, Burlington, Cumberland, Hudson, Hunterdon, Middlesex, Monmouth, Warren.

Gold medals were awarded to the following cities for work of pupils in city schools:

Atlantic City, Camden City (General), Camden City (Manual Training), East Orange, Elizabeth, Hoboken, Jersey City (High and Training School), Jersey City (Elementary Schools), Jersey City (Kindergarten), Long Branch, Morristown, Newark (Elementary Schools), Newark (Evening Drawing Schools), New Brunswick, Orange, Passaic City, Paterson, Plainfield, Salem City, Town of Union, Trenton (General), Trenton (Music), Vineland.

THE NEW JERSEY STATE MUSEUM, GEOLOGICAL AND AGRICULTURAL EXHIBITS AT THE PAN-AMERICAN EXPOSITION, BUFFALO, 1901.

We are proud of the part New Jersey took in the Pan-American Exposition, at Buffalo, in 1901. It was plainly shown at this exposi-

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tion, as at Charleston, St. Louis and Jamestown, that the establishment of the State Museum was a wise plan. When the request was made by the Director-General and Exposition Commission that the exhibits in the Educational, Geological and Agricultural Departments be sent to the exposition, it would have been almost impossible to comply with it if the State Museum had not preserved nearly all of the exhibits, cases, cabinets, glass jars, &c., from the Chicago and former expositions. Nearly all of the material from the several New Jersey State exhibits at the World's Fair at Chicago, in 1893, including the Educational, Geological, Agricultural and large photographs of places in New Jersey, had been placed in the Museum, and for this reason it was easy to make the exhibit at Buffalo. The success of these exhibits was a great credit to the State, the Museum and the departments that took part in them. The awards received at Buffalo show what credit New Jersey received for her exhibit. The Educational Exhibit received the only Gold Medal given to an Educational Exhibit.

The following medals were received:

Gold Medals.—Educational Exhibit, Geological Exhibit, Agricultural Exhibit, Forestry Exhibit, State Museum Exhibit.

Silver Medals.—State Museum Exhibit (Collection of Woods), State Museum Exhibit (Collective Exhibit), General Exhibit.

Bronze Medal.—State Museum Exhibit (Insect Exhibit).

A special request was received from the Director-General of the Charleston Exposition for the Museum Exhibits, including the Educational and Forestry Exhibits, at the Pan-American Exposition. All costs to be paid by the Directors of the Charleston Exposition, except return freight. These were among the very few of the Pan-American Exhibits that were thus asked to be taken to Charleston. Mr. Peabody, in his letter, gives the reasons for this request. The consent of the Governor and others is also given below.

PAN-AMERICAN, BUFFALO, N. Y.
OFFICE OF
LIBERAL ARTS DEPARTMENT.

October 22d, 1901.

New Jersey Exhibit of Public Schools, S. R. Morse, Manager, Trenton, N. J.:

DEAR SIR—The extent, excellence and success of the Educational Exhibit at Buffalo leads the managers of the Charleston Exposition to seek to give it place in their display. The undersigned has acceded to their request to take charge of the removal of these exhibits, and the installation of an educational exhibit in the new field. It is understood that these exhibits may not be thus transferred without special authority obtained in each case from the owners of the exhibits. You are, therefore, hereby invited to consent to such removal of your exhibit.

The Director-General of the Charleston Exposition authorizes me to say that in case you accede to this request, your exhibit will be packed, freighted to Charleston, installed, cases and fittings being furnished, cared for during the

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New Jersey State Building at Buffalo, 1901.

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Entrance to New Jersey Educational Exhibit which received the gold medal at the Pan-American Exposition at Buffalo, 1901.

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The Art and Manual Training Department of the Educational Exhibit at the South Carolina Inter-State and West India Exposition. Now in State Museum at Trenton.

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Exposition and packed and shipped at the close, all free of expense to you. The only cost will be for return freight. As the rate of return will in almost every case be different from that by which they will reach Charleston, the railroads cannot be expected to return these exhibits free.

As the time intervening between the close at Buffalo and the opening at Charleston is very short an immediate answer is earnestly requested. Please address by letter or wire.

(Signed) SELIM H. PEABODY,
Superintendent of Liberal Arts, Pan-American Exposition.

Dr. David T. Day, of the Forestry and Mines Department of the Pan-American Exposition, made the same request for the New Jersey Forestry Exhibit, to be sent to the South Carolina and West India Exposition.

Mr. S. R. Morse:

DEAR SIR—Permission is very cheerfully given to remove the exhibits above referred to. The invitation is certainly very complimentary and is a just recognition of the skill and care with which the collection was gathered together. I feel justified in granting the request, under the circumstances, without legislative warrant.

I understand the same request is made as to the forestry exhibit and like consent is granted.

Yours respectfully,
(Signed) FOSTER M. VOORHEES.

October 29th, 1901.

ASSENT OF SUPERINTENDENT C. J. BAXTER,
DEPARTMENT OF PUBLIC INSTRUCTION.

We cheerfully assent to the removal of the New Jersey Educational and Forestry Exhibits from Buffalo, N. Y., to Charleston, S. C., on the conditions and for the purposes stated in the within letter of Selim H. Peabody, Superintendent of Liberal Arts at the Pan-American Exposition, and Dr. David T. Day, of the Forestry and Mines Department.

(Signed) C. J. BAXTER,
State Superintendent.
(Signed) S. R. MORSE,
Curator.

Trenton, N. J., October 29th, 1901.

THE SOUTH CAROLINA INTERSTATE AND WEST INDIAN EXPOSITION AT CHARLESTON, 1902.

At Charleston we received eight gold medals, one bronze medal and an honorable mention for the following:

Gold Medals.—Educational Work of the Public Schools of the State; Educational Equipment and Results; Educational Work of the State Normal and Model School; Work of the New Jersey School for the Deaf; Forestry Exhibit; S. R. Morse as Collaborator; State Museum for Exhibits; Injurious Insect Exhibit.

Bronze Medal.—Forestry Exhibit.

Honorable Mention.—Preparation of Woods.

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LOUISIANA PURCHASE EXPOSITION IN ST. LOUIS IN 1904.

The following grand prizes and medals were received at the Louisiana Purchase Exposition at St. Louis in 1904:

Grand Prizes.—Five grand prizes were received for the following: Pool of Salt Water Containing Live Fish from New Jersey; The Museum Exhibit of Insects (including the "How to Exterminate Mosquitoes" Exhibit); the Educational Exhibit Collectively; the Museum Exhibit Collectively; the Geological Exhibit Collectively.

Gold Medals.—For the Arrangement of the Forestry Exhibit; for Exhibit of Birds, Fish, &c., from the State Museum; Forestry Department of the State Museum; Curator of the Museum, S. R. Morse, as Collaborator; Department of Public Instruction; S. R. Morse for Original Plan of Installation; Collective Exhibit of County Schools; Trenton, Normal School, Collective Exhibit; Trenton, Model School, Collective Exhibit; Geological Exhibits; Maps and Relief Models (Geological); Rocks, Minerals, Ores and Fossils (Geological); Clay and Clay Products (Geological); Social Economy Department; Bureau of Statistics of Labor and Industry (Bound Report); State Board of Health (Statistical Exhibit); Dr. Henry Mitchell (Collaborator); Baron De Hirsch Agricultural School (General Exhibit).

The following city schools received gold medals: Newark Board of Education (High, Night and Manual Training School Work); East Orange (High School and Manual Training); Montclair High School Work; Montclair Manual Training Work; Plainfield High School Work; Camden High School, Primary and Manual Training Work; Paterson, Manual Training Work; Newark, Elementary Collective Exhibit; Paterson, Drawing and School Work; Plainfield, Elementary Collective Exhibit; Atlantic City, General Work.

Silver Medals.—East Orange Board of Education, Collective Elementary Exhibit; Montclair Board of Education, Collective Elementary Exhibit; Morristown Board of Education, Drawing; Trenton Board of Education, General Exhibit; Trenton Board of Education, Special Music; S. R. Morse, Key to Educational Exhibit of New Jersey; James L. Green, Principal of State Normal and Model School; New Jersey Commission for General Exhibit; Geological Survey, Microscopic Showing of Rock Sections; S. H. Hamilton, Collaborator of Geological Exhibit; N. J. Training School for Feeble Minded Boys and Girls, for Pupil's Work; Oyster Exhibit of How Oysters and Clams are Raised; the Hoboken Industrial School; Henry B. Kümmel, State Geologist as Collaborator of Clay Exhibit.

Bronze Medals.—Department of Public Instruction, Commercial High School Work; Bordentown Manual Training and Industrial School for Colored Youths, General Work; New Jersey School for the Deaf, General Work; Asbury Park Board of Education, General Work.

THE NEW JERSEY STATE MUSEUM AT THE WORLD'S FAIR, ST. LOUIS.

Taken from the "New York Herald," Sunday, June 5th, 1904.

This is the first time the New Jersey State Museum has ever had a fish and game exhibit. Some of its features are the manner of presenting birds in groups consisting of male and female, the nests and eggs, and in some cases the young with the environments of the birds. No other exhibit at the World's Fair has done this. This method is pronounced the best that has ever been shown at a world's fair. The fish specimens are so well mounted that they seem real. The quadrupeds are also in groups, showing in some cases the male,

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Office of Educational Exhibit at St. Louis.

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Prospective view of Educational Exhibit at St. Louis, 1904.

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Geological Exhibit at St. Louis in 1904.

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female and young with their native surroundings. These attract much attention and are admired by all. Some of them are of the opossum, the skunks, the muskrats, young and nest, &c.

The oyster exhibition, consisting of a tank representing a real oyster bed, with other specimens, shows the manner of raising, taking and marketing them. The big pool, forty feet across, filled with salt water, contains fish from the Jersey coast waters. This is one of the features of the World's Fair.

The insect exhibit, prepared by Professor John B. Smith, the State Entomologist, is pronounced the best of its kind ever made. It contains specimens of all the injurious insects and how to destroy them. It is being studied by experts from all parts of the world. The mosquito exhibit is the largest and excites the most interest. It is really wonderful and furnished a complete course of education in mosquito extermination. It shows thousands of the different kind of mosquitoes, the places in which they breed, the various stages of development, method of draining mosquito pest holes, samples of various small fish that feed on the mosquito larvæ, and enlargements of mosquitoes in all their various forms from the egg to the mature insect on transparencies. The spaces about this exhibit are always crowded by curious people. Mr. Morse, Curator of the State Museum, who has been hard at work for almost a year in getting these New Jersey exhibits into shape, is very proud of the complete success that has crowned his efforts. Jerseymen who visit the Exposition should not fail to inspect their State Exhibits.

THE NEW JERSEY SALT WATER FISH, INSECT AND MOSQUITO EXHIBIT.

Extracts from the "Plainfield Express."

The exhibit of live salt water fish from this State, which is shown in its tank, forty feet across, is the only one worth mentioning at the fair, and will undoubtedly receive first prize. The water in the tank is kept constantly running by means of force pumps, and is also filtered every day.

In connection with this exhibit there is also shown a characteristic Jersey oyster bed, under running salt water, with the oysters living and growing, showing the bivalves in the various stages of their development, the whole presenting the life of the oyster exactly as it is under natural condition. This is the first time in the history of the world, as far as known, that such an exhibit has been made. This exhibit is one of the star features of the exposition.

New Jersey's insect exhibit at the fair, which includes the collection of mosquitoes and a graphic exposition of the work being done in this State for their extirpation, is attracting the attention of scientists from all parts of the world, who are at St. Louis, and the part of this exhibit relating to the mosquitoes is being studied by foreign savants, with a view of adopting the Jersey method in ridding other parts of the world of the troublesome insect.

Among all the New Jersey exhibits the most unique and the one attracting the most attention consists of a number of glass tubes in which the development of the mosquito, from its inception to its full fledged growth and biting ability, is illustrated. In conjunction with this exhibit is shown a scientific process for exterminating the mosquito.

New Jersey's best exhibit is its educational one, and teachers from other states, while visiting the fair, devote most attention to the New Jersey methods of teaching as demonstrated by the exhibits. Trenton's exhibit is the best from the State in water color painting and in music.

The insect exhibit received at Buffalo, 1901, a gold medal; at Charleston, 1902, a gold medal; at St. Louis, 1904, grand prize and a gold medal.

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THE MUSEUM EXHIBIT AT JAMESTOWN.

All of the exhibits at Jamestown were under the supervision of the State Museum, except the historical, which was prepared by Francis B. Lee, and the geological, which was under the supervision of Dr. Henry B. Kümmel. The exhibits were among the best shown at the exposition and received the highest and most rewards of any state.

All of the Museum exhibits were in the largest exhibit building. The Comparative Educational Exhibit was the first of its kind ever shown at any exposition. It was a most instructive display and was studied carefully by hundreds of teachers and educators. Its purpose was to show just what advancement had been made by the public schools of New Jersey in the past 31 years. It consisted of school exhibits shown at Philadelphia in 1876, New Orleans in 1884, Chicago in 1893, Buffalo in 1901, South Carolina in 1902 and new work for the Jamestown Exposition in 1907.

The importance of the State Museum was again shown by these exhibits, which were the best the State ever made at an exposition, and the cost, as shown by the Secretary of the Exposition Commission, Gen. Lewis T. Bryant, was only about $3,500. If the exhibits had been newly collected and new cabinets and show cases purchased, it would have cost at least $25,000.

TER-CENTENNIAL EXPOSITION AT JAMESTOWN, 1907.

The following medals were received at the Ter-Centennial Exposition at Jamestown in 1907:

Gold Medals.—New Jersey State Commission, for Exhibit of Health Resorts; New Jersey State Museum, Collective Social Economy Exhibit; New Jersey State Museum, Exhibit of Birds, Eggs, Nests, Insects, &c.; State of New Jersey, for Comparative Educational Exhibit; New Jersey State Museum, for Methods of Extermination of Mosquitoes; Geological Exhibit of Minerals, Maps, &c.; State Road Department, for Exhibit of Good Roads, Maps, Charts, &c.; State Museum, for Entire Exhibit; Forestry Exhibit, Sliced Woods, Method of Showing Them; School for the Deaf, Work of Pupils; School for Feeble-Minded, Work of Pupils; S. R. Morse, for Installation of Exhibit.

Silver Medals.—Department of Public Instruction, for Advancement in Three Years; New Jersey State Museum, for Collection of Woods; State Museum, for Grouping of Birds; State Normal and Model School.

Bronze Medals.—Historical Exhibit.

Certificate for best, S. R. Morse, Director of Exhibits, for Method of Installation and Showing Exhibits.

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Front view of the N. J. Comparative Educational Exhibit at the Jamestown Exposition, 1907.

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Front view of the N. J. Social Economy Exhibit, representing 15 different State Departments and Institutions at Jamestown Exposition from the New Jersey State Museum.

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Fish and Game Exhibit at the Jamestown Exposition from N. J. State Museum.

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New Jersey State Building at Jamestown Exposition, 1907.

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Medals received at the various Expositions.

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SUMMARY OF MEDALS, ETC., RECEIVED AT THE VARIOUS EXPOSITIONS.

Centennial Exposition at Philadelphia, Pa., 1876.—Awards, 4; certificates, 17.

The World's Exposition at New Orleans in 1884.—Awards, 5; diplomas, 10; certificates of merit, 6.

Columbian Exposition at Chicago in 1893.—Gold, 7 (Counties and Schools, 31 gold medals).

Pan-American Exposition at Buffalo in 1901.—Gold, 6; silver, 2; bronze, 2.

The South Carolina Inter-State and West Indian Exposition at Charleston in 1902.—Gold, 8; bronze, 1; honorable mention, 1.

Louisiana Purchase Exposition at St. Louis in 1904.—Grand prizes, 5; gold, 29; silver, 14; bronze, 4.

Ter-Centennial Exposition at Jamestown in 1907.—Gold, 12; silver, 4; bronze, 1; certificates, 1.

PUBLICATIONS RECEIVED.

Journals of the American Museum of Natural History.
Bulletins of the Zoological Society of New York.
Bulletins of the Charleston Museum, Charleston, S. C.
Zoological Bulletins, Division of Zoology of Pennsylvania.
Bulletin No. 28, N. Y. Botanical Gardens.
Guide No. 1, Brooklyn Botanical Gardens.
Circulars Nos. 159, 160, 163, 164, 165 of the University of Ill., Agricultural Station.
Eighth Annual Report of the Forest Park Reservation Commission of N. J.
Bulletins of the Detroit Museum of Art.
Circular 87, U. S. Dept. of Agriculture.
Notes on Russian Natural History Museum.
Circular 23, U. S. Dept. of Agriculture.
Bulletin of the Brooklyn Entomological Society, Vol. 8, No. 2.
Quarterly Bulletins of the Pennsylvania Museum.
Record of the Brooklyn Botanical Garden.
Science Bulletin, Vol. 2, No. 2, The Museum of the Brooklyn Institute of Art and Science.
University of Ill. Bulletins Nos. 64–67.
University of Ill. Soil Report No. 1. Clay County Soils.
Brooklyn Botanical Garden Report, Vol. 2, No. 2.
Annual Report of the Philadelphia Museum for 1912.
U. S. Dept. of Agriculture, Bureau of Biological Survey, Circulars Nos. 92 and 93.
Third Biennial of the Board of Curators of the Louisiana State Museum.
Report of the Shade Tree Commission of the City of Newark.
Example of Woodlot Forestry, Forest Park Reservation Commission of New Jersey.
Annual Report of the Directors of Field Museum, Vol. 4, No. 3.
Bulletins of Wisconsin Natural History Society, Vol. 10, Nos. 3 and 4; also Vol 9, Nos. 1–4.
Geology of Sangamon County, by Curator of the Ill. State Museum of Natural History.
Dept. of Agriculture of Penna., Bulletin No. 219.
State Board of Agriculture of N. J., "Principal and Practice of Poultry."
Camden Board of Trade Journal.
New York Zoological Society Bulletin, Vol. 1, No. 2.
Detroit Museum of Art, Annual Reports for 1912 and 1913.
Proceedings of the American Association of Museums, Vol. 7, 1913.
University of Colorado Studies, Vol. 10, No. 2.
Fourth Annual Report of the Trustees of the American Association of Museums.
Report of 1912 of the Museum of the Brooklyn Institute of Art and Science.
University of Ill., Soil Report No. 5.
The Mineral Industry of New Jersey for 1912.
Brooklyn Botanical Garden Leaflet, Series 1, No. 13.
Regulations for the Protection of Migratory Birds.

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Annual Report of the Fish and Game Commission of New Jersey for 1913.
Report of the Provincial Museum for the year of 1912.
The Mollusca of Colorado, Part 3.
Penna. Museum and School of Industrial Art, 36th Annual Report.
Manufacturing in Phila., 1683–1912. The Commercial Museum.
Missouri Botanical Garden, 23d Annual Report.
Entomologisk Tidskrift, Arg. 34, Hoft 1; also Arg. 34, Hofts 3–4.
Needless Regulation of Museums, Curator of the State Museum of Natural History, Springfield, Ill.
Bulletin of Penna. Museum for January, 1914.
Journal of the American Museum of Natural History, December, 1913.
Journal of the American Museum of Natural History, January, 1914.
University of California, Department of Zoology, Vol. 12, No. 3, pp. 31–50.
University of California, Department of Zoology, Vol. 12, No. 2, pp. 25–29.
University of California, Department of Zoology, Vol. 12, No. 1, pp. 1–24.
University of California, Department of Zoology, Vol. 10, No. 2, pp. 125–129.
University of California, Department of Zoology, Vol. 10, Nos. 3 and 4, pp. 131–142.
University of California, Department of Zoology, Vol. 10, No. 5, pp. 143–153.
University of California, Department of Zoology, Vol. 10, Nos. 6 and 7, pp. 155–169.
University of California, Department of Zoology, Vol. 10, No. 8, pp. 171–178.
University of California, Department of Zoology, Vol. 10, No. 9, pp. 179–195.
University of California, Department of Zoology, Vol. 11, No. 1, pp. 1–20.
University of California, Department of Zoology, Vol. 11, No. 2, pp. 21–28.
University of California, Department of Zoology, Vol. 11, No. 3, pp. 29–51.
University of California, Department of Zoology, Vol. 11, No. 4, pp. 53–88.
University of California, Department of Zoology, Vol. 11, No. 5, pp. 89–126.
University of California, Department of Zoology, Vol. 11, No. 6, pp. 127–142.
University of California, Department of Zoology, Vol. 11, Nos. 7 and 8, pp. 143–172.
University of California, Department of Zoology, Vol. 11, No. 9, pp. 173–180.
University of California, Department of Zoology, Vol. 11, No. 10, pp. 181–196.
University of California, Department of Zoology, Vol. 10, No. 10, pp. 197–406.
University of California, Department of Zoology, Vol. 11, No. 11, pp. 197–305.
University of California, Department of Zoology, Vol. 10, No. 1, pp. 1–124.
University of California, Department of Zoology, List and Index to Publications.
Bulletin of the Charleston Museum, Vol. 9, No. 8.
Bulletin of the Charleston Museum, Vol. 10, No. 1.
Bulletin of Detroit Museum of Art, Vol. 8, No. 1.
Board of Equalization of Taxes of New Jersey, Report of 1912.
New Jersey Agricultural Experiment Station, Bulletin No. 126.
Annual Report of the Smithsonian Institute for 1912.
American Museum of Natural History, Guide Leaflet Nos. 38 and 39.
New Jersey Audubon Society, Leaflet No. 2.
University of California, Vol. 13, No. 7.
New Jersey Civil Service Commission Report for 1913.
Louisana State Museum, 4th Biennial Report.
The Red Wing Blackbird, by A. A. Allen.
Bulletin of The Penna. Museum for July, 1914.
Brooklyn Botanical Garden, Leaflet No. 5, Series 2.
University of California, Vol. 13, No. 6.
Wistar Institute of Anatomy, Vol. 17, No. 1.
New Jersey Audubon Society, No. 7.
New Jersey Audubon Society, Leaflet No. 1.
U. S. Department of Agriculture, Farmers' Bulletin 513.
Efficiency Report of the Board of Commissioners of Trenton, N. J.
Anales de La Sociedad Cientifica, Argentina.
Catalogue of Objects used by Prehistoric People in what is now Douglas & Sarpy Counties, Nebraska.
Camden Board of Trade Journal, Vol 4, No. 8.
University of Ill. Circular 172 and Bulletin 166.
Brooklyn Botanical Garden Leaflet No. 1, Series 2.
Brooklyn Botanical Garden Leaflet No. 2, Series 2.
Brooklyn Botanical Garden Leaflet No. 4, Series 2.
Brooklyn Botanical Garden Leaflet No. 6, Series 2.
Brooklyn Botanical Garden Leaflet No. 7, Series 2.
Brooklyn Botanical Garden Leaflet No. 8, Series 2.
Brooklyn Botanical Garden, Vol. 3, No. 1.
Brooklyn Botanical Garden, Vol. 3, No. 3.
First, Second and Third Annual Reports of the N. J. Audubon Society.

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New Jersey and Penna. Audubon Bulletins Nos. 1–5.
New Jersey Audubon Bulletin No. 6.
University of Ill. Bulletin, Vol. 10, No. 36.
University of Colorado Studies, Vol. 11, No. 1.
Annals of the Missouri Botanical Garden, Vol. 1, No. 1.
Annals of the Missouri Botanical Garden, Vol. 1, No. 2.
University of California Bulletin, Vol. 12, No. 4.
Annual Report of the U. S. National Museum, 1913.
Bulletin of the Wisconsin Natural History Society, Vol. 11, No. 4.
Bulletin of the Wisconsin Natural History Society, Vol. 11, No. 3.
Bulletin of the Wisconsin Natural History Society, Vol. 11, Nos. 1–2.
American Museum of Natural History Journal, Vol. 14, No. 5.
Camden Board of Trade Journal, Vol. 3, No. 12.
Camden Board of Trade Journal, Vol. 4, No. 6.
Camden Board of Trade Journal, Vol. 4, No. 7.
American Museum of Natural History, 45th Annual Report for 1913.
Bulletin of the Charleston Museum, Vol. 10, No. 5.
University of California Bulletin, Vol. 11, Nos. 13, 14, 15.
University of California Bulletin, Vol. 12, Nos. 5, 6, 7.
University of California Bulletin, Vol. 13, Nos. 1, 2, 3, 4.
Zoologica, Vol. 1, Nos. 12, 13, 14, 15.
Field Museum of Natural History, Publication 176, Zool. Series, Vol. 10, No. 12; also Publication 173, Vol. 4, No. 4.
American Museum of Natural History Journal, Vol. 13, No. 1.
American Museum of Natural History Journal, Vol. 12, No. 6.
Zoological Society Bulletin, Vol. 17, No. 2.
Bulletin of Chicago Academy of Sciences, Vol. 3, Nos. 6, 8, 10.
Bulletin of Chicago Academy of Sciences, Vol. 4, Nos. 1, 2.
Report of Provincial Museum of Natural History, Provinces of British Columbia.
Annual Report of Philadelphia Museum for 1913.
Annual Report of the Fish and Game Commission of New Jersey for 1912.
Bulletin of the New York Botanical Gardens, Vol. 8, No. 30.
Zoological Society Bulletin No. 50, N. Y. Zool. Society.
Bulletin of Penna. Museum No. 46.
Bulletin of the Charleston Museum, Vol. 10, Nos. 2 and 4.
University of Illinois, Circular 169.
University of Illinois, Bulletin 165.
Bulletin of Detroit Museum of Art, Vol. 8, No. 2.
Field Museum of Natural History, Publications 174, 175, Zool. Series.
Brooklyn Botanical Garden Record, Vol. 3, No. 2.
American Museum of Natural History Journal, Vol. 14, No. 3.
Camden Board of Trade Journal, Vol. 4, Nos. 1–12.
Proceedings of the Portland Society of Natural History.
Brooklyn Botanical Garden Record, Vol. 3, Nos. 1–4.
Brooklyn Botanical Garden Record, Vol. 4, No. 1.
Quarterly Bulletins of the Detroit Museum of Art for 1913 and 1914.
Annual Reports of the Staten Island Association of Art and Science for 1910–1911, 1911–1912, 1912–1913.
Annual Reports of Staten Island Association of Art and Science for March–May, 1909, and January–May, 1910; also reprint from Vol. 2, Part. February–May. 1908.
Report of the Entomological Department of the New Jersey Agricultural College Experiment Station, New Brunswick, N. J.
University of California Publications in Zoology, Vol. 12, Nos. 4, 8, 9 and 10; also Vol. 13, Nos. 8, 9, and 10.
Second Annual Report of the Atlantic County Mosquito Extermination Commission.
Annals of the Missouri Botanical Garden, Vol. 1, No. 3.
Bulletins of the Pennsylvania Museum, Philadelphia, Pa.
38th Annual Report of the Pennsylvania Museum and School of Industrial Art.
Great Britain and the European Crisis.
Brooklyn Botanic Garden Leaflets.
Berichten en Mededeelingen van het Nederlandsch Schoolmuseum No. 21.
N. J. Audubon Bulletin No. 8.
Bulletin of the Wisconsin Natural History Society, Vol. 11; also Vol. 12, Nos. 1 and 2.
U. S. Department of Agriculture, Farmers' Bulletin No. 628.
Museums of the Brooklyn Institute of Art and Sciences Report for the year of 1913.
Bulletins of the Charleston Museum for 1914.

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University of Colorado, Vol. 11, No. 1.
Zoologica, Vol. 1, Nos. 17 and 18.
The New York Zoological Society Bi-monthy Bulletins for 1914, and January Bulletin of 1915.
American Museum of Natural History Guide Leaflet, Series Nos. 38, 39.
American Museum of Natural History Journals for years of 1913 and 1914.
University of Ill. Agricultural Experiment Station Bulletins 166 to 177 inclusive; also Circulars 173 to 175.
University of Ill. Bulletin No. 76, Engineering Experiment Station.
University of Ill. Agricultural Experiment Station, Soil Report No. 7.
University of Ill. Bulletin, Water Survey, Series No. 11.
Report of the Illinois State Museum of Natural History for 1911 and 1912.

LIST OF SPECIMENS PROCURED BY PURCHASE.

Birds.—2 Bobolinks and nest; 2 Brants; 1 Coot; 2 Crow, Fish, also eggs; 1 Duck, Wood; 1 Eagle, Golden; 1 Eider, American; 1 Finch, Golden; 1 Grosbeak, Pine; 1 Gull; Guinea Hens, group of; 1 Hawk; 1 Hawk, Sparrow; 1 Humming Bird, nest and eggs; 2 Pheasant, English, nest and eggs and young; 1 Plover, young; 1 Plover, male; Quail, group of; Teal, Green, group of; 2 Wood Mergansers, also nest.

Mammals.—1 Bat, Red; 2 Otter, male and female; 1 Squirrel, Black; 1 Seal, Harbor.

Amphibian and Reptile.—1 Pine Snake; 1 Common Box Tortoise; 1 Red-bellied Terrapin; 1 Musk Turtle; 1 Mud Turtle; 1 Muhlenberg's Turtle; 1 Spotted Terrapin; 1 Diamond-back Terrapin; 1 Map Turtle.

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Visual Instruction or Lantern Slides

For use in the Public Schools of New Jersey.

During the past year the Commissioners of the New Jersey State Museum have adopted a plan whereby sets of lantern slides on educational subjects may be loaned to the public schools or State departments. The Commission was a unit in adopting this plan, which was suggested by the Curator. It also has the hearty support of several of the State departments—Educational, Geological, Forestry, Fish and Game, Agricultural and others.

The intention is to have sets of slides on various subjects. Several of the departments have consented to furnish negatives or photographs, illustrating subjects in which they are interested. The Commissioner of Education, Dr. Kendall, and his deputies, are very enthusiastic on the subject.

REGULATIONS.

The slides are of standard size, 3¼ by 4 inches.

The slides will be loaned to superintendents, and to principals or teachers in public schools, to illustrate courses of study in various subjects, or to State departments. All public schools in the State are entitled to borrow slides for educational purposes.

Slides must not under any circumstances be used for other than educational purposes. Unless special permission is obtained, they must not be used upon any occasion for which an admission fee is charged, and they must not be rented or loaned to others. Any violation of these rules will render the borrower liable to lose the privilege of having slides.

***Subjects.*—It is intended to have represented almost every subject admitting of illustration, including natural scenery, historical places and subjects, manners and customs of peoples, industries, physical phenomena, painting, manual training work, literature, forestry, extermination of insects and agriculture.**

A catalogue of the slides now on hand will be issued soon, and as new sets are procured, supplementary list will be published. We may not at first always be able to fill an order promptly, but we hope in time to have enough duplicates to make this possible.

***Application.*—The Curator of the Museum will, upon request, furnish application blanks. Applications should be sent in at least two weeks before the slides are desired, to allow time to procure those not in stock.**

***Time Limit.*—Slides will be loaned for a period not exceeding two weeks, unless the time is extended by special arrangement. If it is found necessary to curtail the time limit on some set for which there is a special demand, the borrower will be notified when the application is received. The application should state the exact length of time for which the slides are desired. An ex-**

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tension of time can be secured upon application, if the set has not been asked for by some other person.

Cost.—The only expense to the borrower is the cost of transportation both ways. This must be paid in advance by the borrower, and in case of over-payment the excess amount will be refunded. Transportation expenses should not be over one dollar both ways.

Shipment.—Shipment will be made by express or parcel post. The application should give name of nearest express office or post office.

Each shipment will be accompanied by a statement of the number of slides sent, and a notice will be mailed to the borrower advising of the date of shipment. If the slides are not received promptly the Curator of the Museum should be notified.

Loss or Breakage.—The package should be opened as soon as it arrives, the contents examined and the statement checked. Any breakage or any difference between the statement and the contents of the package should be reported at once to the Curator. This will obviate any liability on the part of the borrower for damages in transit.

Borrowers will be held responsible for any loss or breakage of slides while in their possession, the charge being the cost of replacing the slide or slides.

Return of Slides.—Before taking the slides from the box note carefully how they are packed. When they are to be returned pack them in the same box and in the same manner as received. Use special care to place paper between all slides. Borrowers will be held responsible for breakage resulting from careless packing on their part.

Use of Slides.—Lantern slides may be used in giving formal illustrated lectures. Such lectures, delivered to pupils in schools, to study clubs, or to the general audience, serve useful purposes. But as a piece of school apparatus the lantern has more important uses. The diagrams, charts, maps and pictures prepared for use with the lantern should be closely studied by teachers and pupils. They are an important aid in pursuing the course of study. The purpose of this apparatus is not to entertain merely, but to instruct, to awaken interest and to stimulate the pupils' mental activity.

While important topics of general public interest may sometimes be profitably presented with the aid of the lantern in Friday afternoon talks or evening lectures, systematic class room use of slides in developing the course of study is recommended. Usually but a single topic should be studied and comparatively few slides presented at one time. An image on the screen should be studied in the same manner as if it were a drawing on the blackboard or a picture in a book. There should be discussion and note taking. Pupils as well as teachers should study slides in advance with the aid of books and explain their significance to the class.

MOTION PICTURES.

The following is taken from a report of the Commissioner of Education, New York State, on "Visual Instruction" by Alfred W. Abrams, Chief, Division of Visual Instruction.

"The division has not undertaken to provide motion picture films. Motion pictures, as they have thus far been generally used, do not fulfill the requirements for teaching mentioned in the preceding paragraph. Much is being said for their educational value. As a place of amusement, the motion picture theatre just now is the center of attraction. A good deal is said about the use of these pictures in schools I have not been able to find many schools that make regular use of them. We may very properly postpone approval of motion pictures until there is presented more satisfactory evidence of their worth as a real educational agency.

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"At best the field for the continuous film does not seem to be so extended as is often claimed. On fuller consideration it must be seen that certain large and important subjects of learning cannot be illustrated by motion pictures. Art, including painting, sculpture and architecture, is one of them. Physiography and geology, with their related subjects, are others. The thing to be illustrated in this way must of course be one that is commonly in action. Very many of the things studied do not move at all or move too slowly to be represented by a motion picture."

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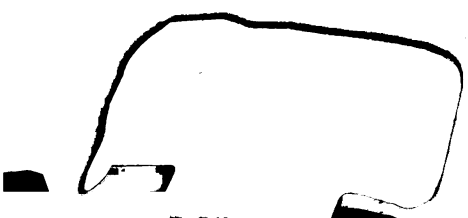
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